

Amendments to the Claims

Claims 1-44. (Canceled)

45. (Currently amended) A reactive precursor feeding manifold assembly, comprising:

an elongate body comprising an elongate plenum chamber, the plenum chamber having a longitudinal axis, the plenum chamber having a first longitudinal axis end and a second longitudinal axis end;

the plenum chamber comprising a plurality of precursor inlets received along the longitudinal axis;

respective precursor feed streams on the body feeding to the plenum chamber precursor inlets, the respective precursor feed streams including an elongated segment joining with its plenum chamber precursor inlet and which is oriented substantially normal to the longitudinal axis;

respective multi-inlet valves positioned proximate the body in the respective precursor feed streams, the respective multi-inlet valves having at least two valve inlets and at least one valve outlet, one of the valve inlets being configured for connection with a reactive precursor source, another of the valve inlets being configured for connection with a purge gas line;

a purge gas inlet to the plenum chamber at the first longitudinal axis end and upstream of all precursor inlets to the plenum chamber;

a purge gas stream on the body feeding to the purge gas inlet through a single-inlet valve, the purge gas stream including an elongated segment extending from the single-inlet

valve to and joining with the purge gas inlet and which is entirely substantially aligned on the longitudinal axis;

the body comprising a plenum chamber outlet at the second longitudinal axis end configured to connect with a substrate processing chamber; and

a structure on the body configured to mount the body directly to a substrate processing chamber with the plenum chamber outlet proximate to and connected with a substrate processing chamber inlet, the respective multi-inlet valves when the body is so mounted all being totally received within peripheral lateral confines of said chamber housing of the substrate processing chamber.

46. (Previously presented) The manifold assembly of claim 45 wherein the multi-inlet valves have only two inlets and only one outlet.

47. (Original) The manifold assembly of claim 45 wherein the another valve inlet is upstream of the one valve inlet.

48. (Canceled)

49. (Previously presented) The manifold assembly of claim 45 wherein the structure is configured to mount the body to a substrate processing chamber with the longitudinal axis being substantially vertical.

50. (Previously presented) The manifold assembly of claim 45 wherein the structure comprises a projection on the body.

51. (Previously presented) The manifold assembly of claim 45 wherein the structure comprises a flange.

Claims 52-53 (Canceled).

54. (Previously presented) The manifold assembly of claim 45 wherein the plenum chamber purge gas inlet is on the longitudinal axis.

55. (Previously presented) The manifold assembly of claim 45 wherein,
the multi-inlet valves have only two inlets and only one outlet;
the another valve inlet is upstream of the one valve inlet; and
the plenum chamber purge gas inlet is on the longitudinal axis.

56. (Previously presented) The manifold assembly of claim 55 wherein the structure comprises a projection on the body.

57. (Previously presented) The manifold assembly of claim 55 wherein the structure comprises a flange.

58. (Previously presented) The manifold assembly of claim 45 wherein,
the multi-inlet valves have only two inlets and only one outlet;
the another valve inlet is upstream of the one valve inlet; and
the structure being configured to mount the body to a substrate processing chamber

with the longitudinal axis being substantially vertical.

59. (Original) The manifold assembly of claim 58 wherein the structure comprises a projection on the body.

60. (Original) The manifold assembly of claim 58 wherein the structure comprises a flange.

61. (Previously presented) The manifold assembly of claim 58 wherein the plenum chamber purge gas inlet is on the longitudinal axis.